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ABSTRACT

This study sought to examine the structure and consistency of perceptions of behavior deceleration procedures within populations, provide a preliminary "index" of acceptability, determine if these procedures can be categorized into meaningful groups, and examine the consistency of perceptions across populations. Subjects were 20 professional-level staff members who worked full-time with developmentally disabled children. Subjects were presented with descriptions of 22 frequently cited behavior reduction procedures and asked to rate each procedure for "aversiveness," "restrictiveness," "intrusiveness," and the extent to which the procedure was "normalized." Results indicated that subjects did not distinguish among the four terms. Overall, there was considerable consensus among individuals, with most disagreement occurring in the middle range of aversiveness. Based on the findings, procedures could be classified into three levels: (1) least aversive (differential reinforcement procedures, extinction, satiation, and response-cost); (2) more aversive (time-out, negative practice, overcorrection, and both antecedent and contingent exercise); and (3) most aversive (punishment through physical stimulation). The rank ordering of treatments was compared to the rank ordering of a sample of psychology doctoral candidates and found to exhibit a great deal of consistency in ratings. (14 references) (JDD)

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SCALING THE ACCEPTABILITY OF BEHAVIOR DECELERATIVE PROCEDURES: PERCEPTIONS OF STAFF WORKING WITH PERSONS WITH DEVELOPMENTAL DISABILITIES

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INTRODUCTION

At the NIH Consensus Conference on the Treatment of Destructive Behaviors in Persons with Developmental Disabilities the use of aversive treatments was a hotly debated topic. According to one speaker, "What we need is a [treatment] severity index" (Foxx, 1989). Perceptions of aversiveness are a key element in assessing treatment acceptability. However, aversiveness may not be the only dimension relevant to perceptions of treatment acceptability. Among other dimensions, Lundervold and Bourland (1988) state that treatments must also be rated in terms of "intrusiveness," and "restrictiveness." (p. 591). Moreover, many advocate that we consider the extent to which treatments promote the principle of normalization (Wolfensberger, 1972). Finally, past acceptability research has been criticized for deciding the relevant dimensions of aversiveness a priori rather than empirically determining what dimensions people use when making acceptability judgements (Allison, Lee, & Gorman, 1990).

The purposes of this study were: 1) To examine the structure and consistency of perceptions of behavior deceleration procedures within populations; 2) To provide a preliminary "index" of acceptability; 3) To determine if these procedures can be categorized into meaningful groups; and 4) To examine the consistency of perceptions across populations.

Furthermore, an attempt was made to overcome two limitations of past acceptability research. Most acceptability research has asked subjects to evaluate treatments presented in some form of vignette, either written or video taped. This results in two problems. The vignettes by necessity include some information about clients, settings, and behavior problem. These client, setting, and problem variables have been shown to influence acceptability ratings in a nonadditive way. That is interaction effects have been observed between these variables and treatment variables (e.g. Heffer & Kelly, 1987; Kalfus & Burk, 1989; Miltenberger, Lennox, & Erfanian, 1989; Tarnowski, Kelly, Mendlowitz, 1987). Thus, acceptability ratings from one study employing one set of client, setting, and problem variables can not be generalized to situations with other client, setting, or problem variables.

In trying to assess or control for the effects of these variables, researchers have generally had each treatment rated several times while varying client, setting, or problem characteristics. The repetition of vignettes limits the number of different treatments which can assessed in any one study. Most studies have used only three to six treatments. A clinician wishing to choose from among several treatments based on their acceptability might be hard pressed to find a study which assessed all the treatments of interest. And, as was stated earlier, treatments cannot necessarily be compared

across studies due to the confounding by vignette variables.

Thus, the present research sought to assess the acceptability of a larger number of interventions that are more representative of the range of interventions generally utilized in reducing maladaptive behaviors among persons with developmental disabilities. Moreover, an attempt was made to provide subjects with descriptions of treatments which were free of any mention of any variables not directly related to the treatment itself. That is, vignettes were not provided nor was any information about client, setting, or problem characteristics.

Method

Subjects

Subjects were 20 staff members who worked full-time with developmentally disabled children. All subjects were professional level staff (e.g teachers, speech therapists, clinical specialists) and had completed at least a bachelor's degree.

Procedure

Subjects were presented with descriptions of 22 frequently cited behavior reduction procedures (see Table 1) and asked to rate each procedure from 1 to 10 for "aversiveness," "restrictiveness," "intrusiveness," and the extent to which the procedure was "normalized."

The following definitions were provided to each subject:

> Aversive: A stimulus or event is said to be aversive to the extent that a person would ordinarily strive to escape or avoid said stimulus or event.
>
> Intrusive: Intrusive procedures are those which inflict observable signs of physical harm; which result in tissue damage, physical illness, severe physical or emotional stress or death; which are dehumanizing and not considered acceptable for non-handicapped individuals, which create extreme ambivalence and discomfort in those involved, friends, family, and professionals; and/or which create repulsion or stress felt by non-handicapped peers and community members. (based on the definition

from The Association for Persons With Severe Handicaps, 1986)

Restrictive: Restrictive procedures are those which reduce the extent to which a person can live, work, be educated, and interact with members of their peer community. (based on the definition from The State Education Department of New York, 1984).

Normalization: Normalization is the utilization of means which are as culturally normative as possible, in order to establish and/or maintain behaviors and characteristics which are as culturally normative as possible. (from Wolfensberger, 1972).

In selecting treatments, an attempt was made to include a description of the most commonly utilized behavior reduction procedures. Treatments were culled from the following sources: Kazdin, 1989; LaVigna and Donnellan, 1986; Lennox, Miltenberger, Spengler, and Erfanian, 1988.

Data Analysis

Mean ratings on each dimension (aversiveness, intrusiveness, restrictiveness, and normalized) for each treatment were subjected to a principal components analysis. In addition, stimuli were cluster analyzed hierarchically via Ward's method with squared Euclidian distance as the proximity metric.

Results

Based on the scree test, principal components analysis

revealed a single factor explaining 87% of the variance in ratings for all four characteristics. "Aversiveness," "restrictiveness," and "intrusiveness" loaded positively on this factor; "normalized" loaded negatively. This factor was simply labeled "aversiveness." This suggests that subjects did not distinguish among these four terms.

Aversiveness factor scores were computed for each treatment and rescaled to an index ranging from 0 (least aversive) to 10 (most aversive). Aversiveness scores are presented graphically in Figure 1.

To assess the extent to which subjects agreed on treatment aversiveness, varianccs of ratings for each treatment were calculated and rescaled to a "consensus" index, higher numbers representing greater agreement. Overall, there was considerable consensus across individuals, with most disagreement occurring in the middle range of aversiveness (see Figures 2 and 3).

The cluster analysis provided a highly interpretable 3-cluster solution, suggesting that procedures can be classified into "levels". The first level was least aversive and included differential reinforcement procedures, extinction, satiation, and response-cost. The second level included such procedures as time-out, negative practice, overcorrection, and both antecedent and contingent exercise. The final level was dominated by procedures involving punishment through physical stimulation.

Finally, the rank ordering of treatments from this sample was correlated with the rank ordering of treatments from a sample of psychology doctoral candidates (described in Allison & Silverstein, 1990). A rank order correlation coefficient of .92 was obtained indicating that, when treatments are described to subjects without vignettes, a great deal of consistency in ratings exists across samples.

Discussion

This study was exploratory and, as such, requires replication and extension. Psychologists and legislators involved with these issues and parents of developmentally disabled persons might also be surveyed. Perhaps most importantly, the creative researcher will develop a technique wherein the perceptions of persons with developmental disabilities are considered.

Table 1.

Slaps/pinches: Slapping or pinching a person contingent upon the exhibition of a target inappropriate behavior.

Contingent aversive taste: Squirting an aversive substance such as lemon juice or tabasco sauce into a person's mouth contingent upon the exhibition of a target inappropriate behavior.

Differential Reinforcement of Incompatible Behavior (DRI): Reinforcing a behavior which is physically incompatible with the target inappropriate behavior.

Noncontingent restraint/protective devices: Restraining a person or requiring a student to wear mechanical devices which impede him/her from engaging in target inappropriate behaviors.

Differential Reinforcement of Alternative Behavior (DRA): Reinforcing an alternative and appropriate behavior.

Contingent restraint: Physically holding a person's body in such a way as to restrict movement contingent upon the exhibition of a target inappropriate behavior.

Differential Reinforcement of Other Behavior (DRO): Reinforcing a person for going a prespecified period of time without exhibiting the target inappropriate behavior.

Contingent aromatic ammonia: Requiring a person to sniff an ammonia inhalant contingent upon the exhibition of a target inappropriate behavior.

Extinction: Stopping the delivery of a reinforcer that has maintained a behavior in the past.

Time-out: Isolating an individual from social contact or general access to reinforcing objects or activities for a period of time contingent upon the exhibition of a target inappropriate behavior.

Stimulus control: Arranging for a person to be exposed to environmental conditions that produce low rates of the target inappropriate behavior and not to be exposed to environmental conditions that produce high rates of the target inappropriate behavior.

Negative practice: Requiring a person to repeatedly perform the target inappropriate behavior to the point of fatigue.

Differential Reinforcement of Low Rates of Responding (DRL): Reinforcing a person for exhibiting successively lower rates of a high frequency target inappropriate behavior.

Psychotropic medication: The use of medication for the purpose of controlling inappropriate behaviors.

Satiation: Providing the reinforcer believed to maintain the target inappropriate behavior noncontingently and in large amounts.

Response-cost: The contingent withdrawal of reinforcement or the opportunity to obtain reinforcement contingent upon exhibition of a target inappropriate behavior.

Differential Reinforcement of Communicative Behavior (DRC): Shaping an appropriate response which communicates the same message as the target inappropriate behavior. Then, reinforcing the person for exhibiting the appropriate communicative response.

Water mist: Spraying water mist in someone's face contingent upon the exhibition of a target inappropriate behavior.

Contingent electric shock (SIBIS): Administering a 85 volt (3.5 milliamperes) electric shock for 200 milliseconds (.2 seconds) to the surface of the skin contingent upon the exhibition of the target inappropriate behavior.

Overcorrection: Requiring a person to perform a behavior (sometimes repeatedly) that corrects, undoes, or is the desirable opposite of the target inappropriate behavior.

Antecedent Exercise: Requiring a person to engage in aerobic activity (e.g. jogging) during their day to reduce the occurrence of later problem behaviors.

Contingent Exercise: Requiring a person to engage in aerobic activity (e.g. jogging) for several minutes contingent upon the exhibition of the target inappropriate behavior.

Figure 1.

Aversiveness Scores for Behavior Decelerative Procedures

- DD Staff Data

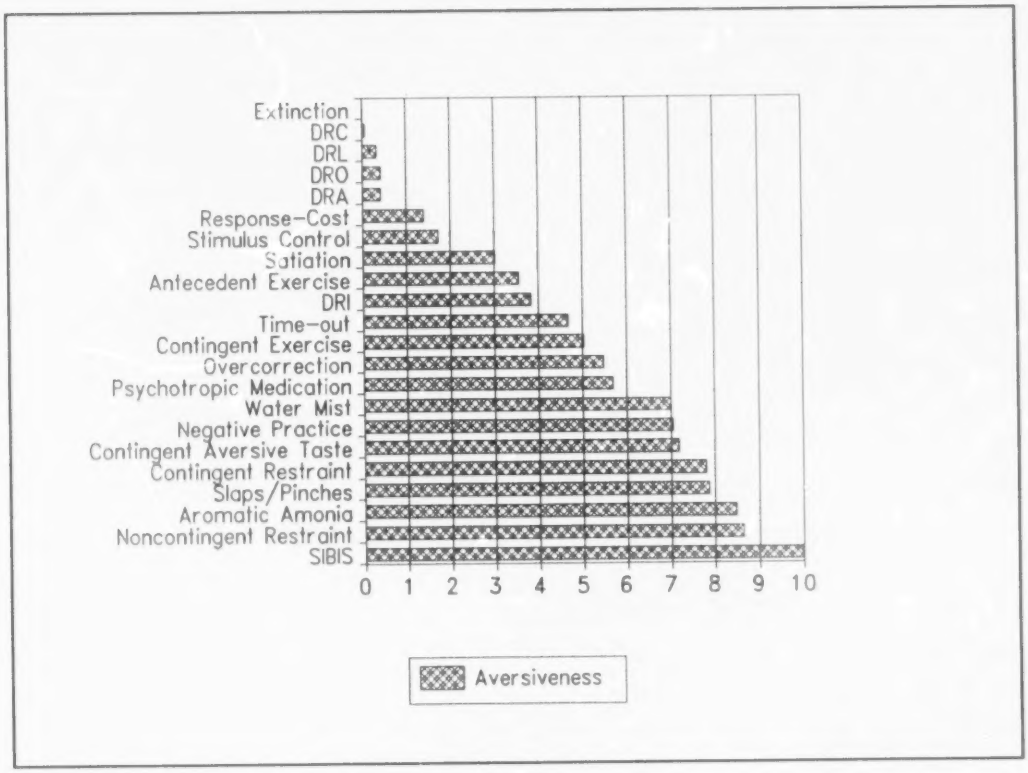


Figure 2.

Consensus Scores for Behavior Decelerative Procedures

- DD Staff Data

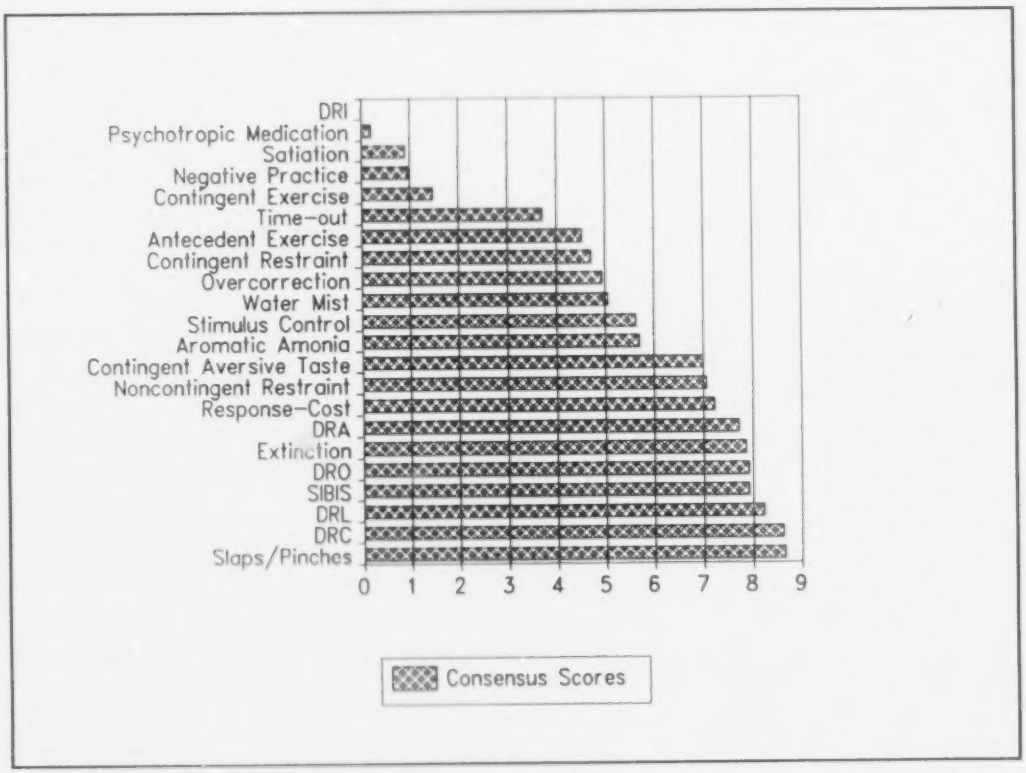


Figure 3.

Aversiveness Scores Plotted Against Consensus Scores for Behavior Decelerative Procedures

- DD Staff Data

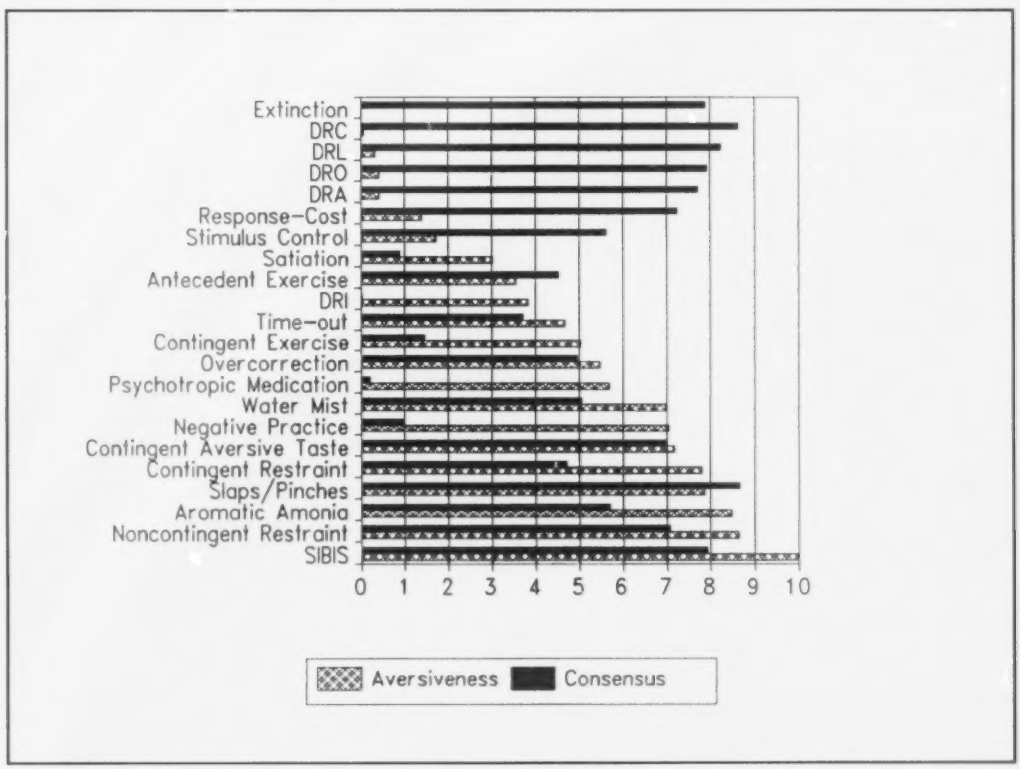
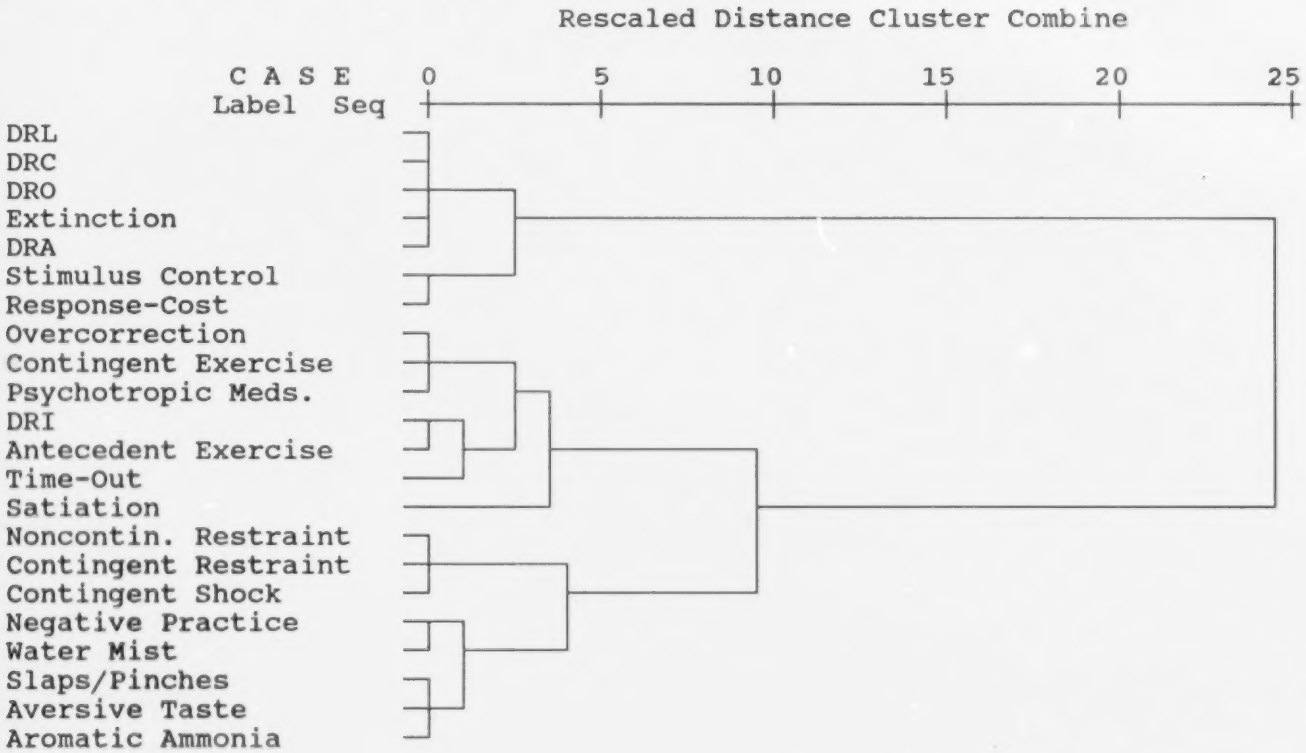


Figure 4.

Dendrogram using Ward Method



References

Allison, D. B. (1990 August). Scaling Aversiveness of Decelerative Procedures. Paper presented at the American Psychological Association Convention, Boston.

Allison, D. B., Lee, M. J., & Gorman, B. S. (1990). Exploring Perceptions of Punishment: The Application of Multidimensional Scaling to the Question of Treatment Acceptability. Submitted for Publication.

The Association for Persons with Severe Handicaps. (1986). Resolution the Cessation of Intrusive Interventions.

Foxx, R. M. (1989, September). Decreasing severe behaviors with punishment procedures: discontinuing their use while maintaining long-term treatment effects. Paper presented at The National Institute of Health Consensus Development Conference Treatment of Destructive Behaviors in Persons With Developmental Disabilities, Bethesda, MD.

Heffer, R. W., & Kelly, M. L. (1987). Mothers' acceptance of behavioral interventions: The influence of parent race and income. Behavior Therapy, 2, 153-163.

Kalfus, G. R., & Burk, B. K. (1989). The influence of case history and treatment mediator on ratings of acceptability of child treatment. Child and Family Behavior Therapy, 11, 45-55.

Kazdin, A. E. (1989). Behavior Modification in Applied Settings.
Belmont: Brooks Cole.

LaVigna, G. W., & Donnellan, A. M. (1986). Alternatives to Punishment:
Solving Behavior Problems with Nonaversive Strategies. New York:
Irvington.

Lennox, D. B., Miltenberger, R. G., Spengler, P., & Erfanian, N. (1988). Five years of decelerative research for behavior problems by developmentally disabled persons: An annotated bibliography. The Mental Retardation and Learning Disability Bulletin, 16, 47-77.

Lundervold, D., & Bourland, G. (1988). Quantitative analysis of treatment of aggression, self-injury, and property destruction. Behavior Modification, 12, 590-617.

Miltenberger, R. G., Lennox, D. B., & Erfanian, N. (1989).

Acceptability of alternative treatments for persons with mental retardation: Ratings from institutional and community-based staff. American Journal on Mental Retardation, 93, 388-395.

The State Education Department of New York. (1984). Regulations of The Commissioner of Education. Subchapter P, Part 200.

Tarnowski, K. J. Kelly, P. A., & Mendlowitz, D. R. (1987). Acceptability of behavioral pediatric interventions. Journal of Consulting and Clinical Psychology, 55, 435-436.

Wolfensberger, W. (1972). The Principle of Normalization in Human Services. National Institute on Mental Retardation.